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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,012	02/26/2001	Jong Seob Kim	PI-120	6950
7590 04/02/2004			EXAMINER	
Ralcorp Holding, Inc. P.O. Box 618 St Louis, MO 63188-0618			MERCADO, JULIAN A	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/786,012	KIM ET AL.	
	Examiner	Art Unit	
	Julian Mercado	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-24-03, 1-28-04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

This Office Action is responsive to applicant's amendment filed December 24, 2003 and January 28, 2004.

By the present amendment, claims 6-9 have been canceled. Claims 1-5 remain pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 24, 2003 has been entered.

Claim Rejections - 35 USC § 112

The rejection of claims 1 and 5 under 35 U.S.C. 112, first paragraph, i.e. the scope of enablement rejection, has been withdrawn.

The rejection of claims 6-9 under the same grounds is deemed moot in view of the cancellation of these claims.

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Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by Kita et al., or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Kita et al. in view of the Merck Chemical Database.

The rejection is maintained for the reasons of record. Applicant's arguments filed with the present amendment have been fully considered, however they are not persuasive.

The examiner notes the amendment to the present claims now reciting that the carbonic ester solvent is present in a ratio from 50 FB: 50 CE to 12.5 FB: 87.5 CE based on volume percent. With respect to the latter ratio and modeling the following calculations similar to that submitted by applicant, the volume percent of FB relative to EC in Kita et al. would be calculated as follows:

$$\begin{aligned}\text{Volume \% FB} &= (\text{volume of FB})/(\text{volume of solution}) \\ &= ((10 \text{ g})/(1.03 \text{ g/cm}^3))/((10 \text{ g})/(1.03 \text{ g/cm}^3) + (90 \text{ g.})/1.34 \text{ g/cm}^3)) \\ &= (9.7\text{cm}^3)/(9.7 \text{ cm}^3 + 67.16 \text{ cm}^3) \\ &= 12.62 \text{ cm}^3\end{aligned}$$

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A volume of 12.62 cm³ is maintained to teach applicant's claimed ratio of 12.5 FB: 87.5 CE to the extent that this value overlaps therewith. The examiner notes applicant's calculation of 11.5 vol. % or 11.5 cm³ for the volume of EC, however, this value is believed to be inaccurate and incorrect for the following reasons:

Applicant's calculation of 11.5 vol. % for the volume of EC is based on the following assumptions as submitted on page 5 of the present response:

For illustration, assume that 10 g (10 weight part) of monofluorobenzene is used by Kita *et al.* as the fluorocarbon component and 100 g (100 weight part) of dimethyl carbonate (DMC) or ethylene carbonate (EC) is used as the solvent for the electrolyte solution.

This assumption is incorrect since 100 g (100 weight part) of DMC or EC was used in the assumption to arrive at the final volume percent of FB. The correct value for the DMC or EC, however, when calculating a weight percent conversion to volume percent is 10 g (10 weight part) of FB to 90 g (90 weight part) of DMC or EC. Applicant's method of calculation and conversion to corresponding volumes based on known densities, while correct, arrives at an underestimated value for volume percent FB since it calculates the volume percent based on 9 g (9 weight part) of FB calculated as $(10 \text{ g FB}) / (10 \text{ g FB} + 100 \text{ g solution}) = 9\%$.

Arguments against the Merck Chemical Database reference for the 35 U.S.C. 103(a) portion of this rejection appears to be directed to this reference failing to remedy alleged differences between the Kita *et al.* and the present claims. However, in view of Kita *et al.* being maintained for the reasons discussed above, the rejection in view of the Merck Chemical Database reference is subsequently maintained for the reasons discussed in the previous Office action. The examiner notes that the Merck Chemical Database was relied upon by the examiner solely as evidence for known density values.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be "Jan", is located on the left side of the page.A handwritten signature in black ink, appearing to be "Patrick Ryan", is located above the typed name.

Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700